

TITLE OF THE INVENTION

Isolation and Purification of *P. falciparum* Merozoite
Protein-1₄₂ Vaccine

5 This application claims the benefit of priority
under 35 U.S.C. §119(e) from U.S. application serial
no. 60/264,535 filed on January 26, 2001, still
pending, and U.S. provisional application filed on
October 26, 2001, still pending. 60/347,564

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INTRODUCTION

Plasmodium falciparum is the leading cause of
malaria morbidity and mortality. The World Health
Organization estimates that approximately 200 million
15 cases of malaria are reported yearly, with 3 million
deaths (World Health Organization, 1997, Wkly.
Epidemiol. Rec. 72:269-276). Although, in the past,
efforts have been made to develop effective controls
against the mosquito vector using aggressive
20 applications of pesticides, these efforts ultimately
led to the development of pesticide resistance.
Similarly, efforts at treatment of the disease through
anti-parasitic drugs led to parasite drug-resistance.
As the anti-vector and anti-parasite approaches
25 failed, efforts became focused on malaria vaccine
development as an effective and inexpensive
alternative approach.

However, the complex parasitic life cycle has
further confounded the efforts to develop efficacious
30 vaccines for malaria. The parasite's life cycle is
divided between the mosquito-insect host and the human
host. While in the human host, it passes through
several developmental stages in different organellar
environments, i.e. the liver stage, the red blood